



DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

[Docket No. FAA-2022-0193]

Agency Information Collection Activities: Requests for Comments; Clearance of a New Approval of Information Collection: ICAO CO₂ Certification Database

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice and request for comments.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995, FAA invites public comments about our intention to request the Office of Management and Budget (OMB) approval for a new information collection. The collection involves the possibility for airplane manufacturers for which the airplane is subject to the applicability of Annex 16, Volume III of the Convention on Civil Aviation (hereinafter the “Chicago Convention”) to submit electronically CO₂ Certification Database (CO₂DB) Datasheet(s) to the FAA. The information to be collected will be necessary because of FAA’s commitment to help a) provide publicly available data on the CO₂ Metric Value (MV) which represents a measure of fuel burn performance of airplane types against CO₂ technology/design standards, b) track and communicate the improvement in airplane CO₂ MVs over time and c) provide an incentive to improve the CO₂ MV of airplane types.

DATES: Written comments should be submitted by **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Interested persons are invited to submit written comments on the proposed information collection to the Office of Information and Regulatory Affairs, Office of Management and Budget. Comments should be addressed to the attention of the Desk Officer, Department of Transportation / FAA, and sent via electronic mail to oir_submission@omb.eop.gov, or faxed to (202) 395-6974, or mailed to the Office of Information and Regulatory Affairs, Office of Management and Budget, Docket Library, Room 10102, 725 17th Street, NW., Washington, DC 20503.

FOR FURTHER INFORMATION CONTACT: Laszlo Windhoffer at (202) 267-4741, or by e-mail at: Laszlo.Windhoffer@faa.gov.

SUPPLEMENTARY INFORMATION: Appendix A “Supporting Statement A”

Public Comments Invited: You are asked to comment on any aspect of this information collection, including (a) Whether the proposed collection of information is necessary for FAA’s performance; (b) the accuracy of the estimated burden; (c) ways for FAA to enhance the quality, utility and clarity of the information collection; and (d) ways that the burden could be minimized without reducing the quality of the collected information. The agency will summarize and/or include your comments in the request for OMB’s clearance of this information collection.

OMB Control Number: 2120-XXXX.

Title: ICAO CO₂ Certification Database (CO₂DB).

Form Numbers: Not applicable.

Type of Review: Clearance of a new information collection.

Background: In March 2017, the International Civil Aviation Organization (ICAO) Council adopted the Volume III of Annex 16 of the Chicago Convention (Environmental Protection) for the implementation of a new airplane CO₂ emissions standard. The Standard will apply to new airplane type designs from 2020, and to airplane type designs already in-production as of 2023. Those in-production airplane which by 2028 do not meet the standard will no longer be able to be produced unless their designs are sufficiently modified to comply with the in-production standard.

To support the implementation of Annex 16 Volume III, ICAO agreed that, similar to noise and engine emissions, an ICAO CO₂ Certification Database (CO₂DB) should be developed and continuously maintained in a publicly accessible manner. The U.S. Federal Aviation Administration will host the new database on behalf of ICAO.

The aim of the CO₂DB is to a) Provide publicly available data on the CO₂ Metric Value (MV) which represents a measure of fuel burn performance of airplane types against CO₂ technology/design standards, b) Track and communicate the improvement in airplane CO₂ MVs over time and c) Provide an incentive to improve the CO₂ MV of airplane types.

The collection of data towards the CO₂DB is expected to leverage the Airplane Airworthiness Certification process, which includes; airplane performance measurement, computation of relevant metrics (e.g., CO₂ MV) and submission of the information to the Certifying Authority (CA) of the State of Design. As part of the airworthiness certification process, the data/information is reviewed by the CA and approved. Given that the submission of information into the CO₂DB is voluntary, it is expected that the applicant (e.g., airplane manufacturer) will decide to submit a CO₂DB Datasheet to its CA and ultimately to the U.S. FAA. If the applicant decides to submit information to the CO₂DB, the applicant will prepare a CO₂DB Datasheet by using the CO₂DB Datasheet Template that will be publicly available via the CO₂DB webpage expected to be hosted on the FAA Office of Environment and Energy website.

Once the U.S. FAA collects the CO₂DB Datasheets it may conduct an information check to identify any gross errors or mistakes. Similar to other ICAO environment databases, the entity submitting the information (in this case the applicant) will be solely responsible for the accuracy of the information. If there are any questions about submissions, the U.S. FAA will communicate with the applicant to attempt to address any issues.

CO₂DB Datasheets will then be integrated into the CO₂DB and the records of changes will be updated. It is expected that the database will be available for download in a common table format (e.g., Microsoft Excel file) as well as a collection of the submitted CO₂DB Datasheets. Additional background and supporting information will also be available on the CO₂DB website along with a Support Function communication mechanism (e.g., email address).

Respondents: Respondents will be airplane manufacturers (or “applicants”) subject to the applicability of Annex 16, Volume III of the Chicago Convention. From the outset, FAA expects about 3 U.S. airplane applicants to submit CO₂DB Datasheets for their certified airplanes. It should be noted that additional respondents from outside the United States (i.e., Airplane Manufacturers for which the Certifying Authority is another ICAO Member State than the United States) are expected to submit CO₂DB Datasheets to the CO₂DB for their certified

airplane. These non-US applicants were assumed to be outside the scope of the burden analysis contained in Supporting Statement A and were therefore not included as respondents.

Frequency: If they decide to submit information to the CO₂DB, the manufacturers will submit data after the certification of an airplane. It is expected that manufacturers would submit one CO₂DB Datasheet for each airplane model. As described in Supporting Statement A and based on historical frequency of airplane certification, each U.S. manufacturer could be expected to certificate up to two new models every three years. Thus, in mathematical terms, the FAA would expect to receive an average of two thirds of one datasheet per year and per respondent.

Estimated Average Burden per Response: It is expected that filling and submitting a CO₂DB Datasheet could take approximately 5 hours.

Estimated Total Annual Burden: Based on the above, FAA expects that the annual submission of CO₂DB Datasheet by U.S. airplane manufacturers could take approximately 5 hours for an average of 2 submissions per year across 3 manufacturers.

Issued in Washington, DC on April 20, 2022.

Julie Marks,

Acting Executive Director,

Office of Environment and Energy.

APPENDIX A:
Supporting Statement A for the
ICAO CO₂ Certification Database

1. Explain the circumstances that make the collection of information necessary. Identify any legal or administrative requirements that necessitate the collection.

On March 6, 2017 the United States (through its International Civil Aviation Organization [ICAO] Council Member) voted to adopt Annex 16, Vol. III of the Chicago Convention. Annex 16, Vol. III contains the Standards and Recommended Practices (SARPs) relating to the implementation of the airplane CO₂ standard.

The ICAO standard applies to (1) Subsonic jet aeroplanes, (2) All propeller-driven aeroplanes, (3) Derived versions of non-CO₂-certified subsonic jet aeroplanes, (4) Derived versions of non-CO₂ certified propeller-driven aeroplanes and (5) Individual non-CO₂-certified subsonic jet aeroplanes and propeller-driven aeroplanes. The standard applies to new airplane type designs submitted for certification after January 1, 2020, and to airplane type designs already in-production as of 2023. After January 1, 2028, airplanes that do not meet the standard may no longer be produced unless their designs are sufficiently modified.

Airplane manufacturers in the U.S. and other ICAO countries are required to show compliance with the ICAO standard at the time of airplane certification.

In February 2016, members of ICAO's Committee on Aviation Environmental Protection (CAEP) agreed that, similar to noise and engine emissions, an ICAO CO₂ Certification Database (CO₂DB) should be developed and continuously maintained in a publicly accessible manner. Information submission to the CO₂DB is done by manufacturers and by the certifying authority of the State of airplane design on a voluntary basis. It is not a requirement or standard contained in Annex 16 Volume III. The United States (FAA) agreed to host the database on behalf of ICAO.

The aim of the CO₂DB is to:

- a) Provide publicly available data on the CO₂ metric value (MV) for each certificated airplane model; MV represents a measure of fuel burn performance of airplane types against CO₂ technology/design standards.
- b) Track and communicate improvements in airplane CO₂ MVs over time.
- c) Provide an incentive to manufacturers to improve the CO₂ MV of each airplane type.

Attachments:

- Annex 16, Vol. III

2. Indicate how, by whom, and for what purpose the information is to be used. Except for a new collection, indicate the actual use the agency has made of the information received from the current collection.

The data expected to be submitted for the CO₂DB is generated during the

airworthiness certification process, which includes airplane performance measurement, computation of relevant metrics (e.g., CO₂ MV) and submission of the information to the Certifying Authority (CA) of the State of Design. As part of the airworthiness certification process, the data and information are reviewed and approved by each CA.

Since submission of information to the CO2DB is voluntary, it is the decision of the certification applicant (e.g., manufacturer) to decide whether to submit CO2DB data to its CA and ultimately to the FAA for inclusion in the database. If the applicant decides to submit information to the CO2DB, the applicant prepares a datasheet using the CO2DB Datasheet Template that will be available on the CO2DB website. The template is a one-page document that requires identification of the airplane type design, whether it is a new type design or in-production, and includes airframe, engine, and propeller information

Following the decision by the certification applicant to submit to the CO2DB, each CA will review the applicant's CO2DB datasheet to ensure that it conforms to the database requirements. The CA will then submit the CO2DB datasheet(s) to the FAA.

Once the FAA collects the CO2DB datasheets, it may choose to conduct an information check to identify any gross errors or mistakes; this process is optional for the FAA as the CA remains responsible for the accuracy of the information and data contained in the CO2DB datasheets it submits to the FAA). If there are any concerns about submissions, the FAA will communicate with the CA in an attempt to address any issues.

The FAA will integrate the datasheets into the CO2DB and update the records of changes. The plan is to have the database available for download in a common table format (e.g., Microsoft Excel file), and as a file of the submitted CO2DB datasheets. Additional background and supporting information will also be available on the CO2DB website along with a Support Function communication mechanism with the FAA (e.g., email address).

The submission of CO2DB datasheets will take place on an ad-hoc (not regular or recurring) basis after an airplane is certificated. One submission is expected for each airplane model following its initial type certification, and again if an airplane model is modified and it requires a recertification for CO₂ in accordance with the regulations of the State of design.

Attachment:

- CO2DB Datasheet template

3. Describe whether, and to what extent, the collection of information involves the use of automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

The CO2DB datasheet template is a Microsoft Excel-based template, which maximizes convenience for certification applicants (i.e., manufacturers) and the Certifying Authority of the State of design. The application is in widespread use

and allows ease of data entry. The CO2DB datasheets will be submitted electronically.

4. Describe efforts to identify duplication. Show specifically why any similar information already available cannot be used or modified for use for the purposes described in Item 2 above.

The CO₂ certification requirement is new in ICAO Annex 16. The conforming U.S. regulatory requirements are in process. At present, airplane certification data submitted to and collected by the FAA does not include airplane level CO₂ certification data as defined in Annex 16, Vol. III.

5. If the collection of information involves small businesses or other small entities, describe the methods used to minimize burden.

This collection will not involve small businesses or small entities.

Note: As described in section 1, the CO₂ certification requirements apply to airplane manufacturers that are generally not considered small businesses or small entities. In addition, Certifying Authorities of the State of design are government entities, not small businesses or small entities.

6. Describe the consequence to Federal program or policy activities if the collection is not conducted or is conducted less frequently, as well as any technical or legal obstacles to reducing burden.

As described in section 1, information submission to the CO2DB is done by manufacturers and the Certifying Authority of the State of design on a voluntary basis. There are no impacts to the airworthiness of an airplane if the CO₂ certification data is not reported to the CO2DB. The aim of the CO2DB is to: a) Provide publicly available data on the CO₂ MV which represents a measure of fuel burn performance of airplane types against CO₂ technology/design standards; b) Track and communicate improvements in airplane CO₂ MVs over time; and c) Provide an incentive to improve the CO₂ MV of airplane types. The absence of CO₂ certification data in the CO2DB would limit transparency and comparison across airplanes types and the industry worldwide.

7. Explain any special circumstances that would cause an information collection to be conducted in a manner:

- ***requiring respondents to report information to the agency more often than quarterly;***

None. Data is submitted voluntarily by airplane manufacturers only when airplanes are required to demonstrate compliance with the CO2 standard.

- ***requiring respondents to prepare a written response to a collection of information in fewer than 30 days after receipt of it;***

None. Submission is voluntary.

- ***requiring respondents to submit more than an original and two copies of any document; requiring respondents to retain records, other than health, medical, government contract, grant-in-aid, or tax records, for more than three years;***

None

- ***in connection with a statistical survey, that is not designed to produce valid and reliable results that can be generalized to the universe of study;***

None

- ***requiring the use of a statistical data classification that has not been reviewed and approved by OMB;***

None

- ***that includes a pledge of confidentiality that is not supported by authority established in statute or regulation, that is not supported by disclosure and data security policies that are consistent with the pledge, or which unnecessarily impedes sharing of data with other agencies for compatible confidential use; or***

None

- ***requiring respondents to submit proprietary trade secrets, or other confidential information unless the agency can demonstrate that it has instituted procedures to protect the information's confidentiality to the extent permitted by law.***

None

8. Provide information on the PRA Federal Register Notice that solicited public comments on the information collection prior to this submission. Summarize the public comments received in response to that notice and describe the actions taken by the agency in response to those comments. Describe the efforts to consult with persons outside the agency to obtain their views on the availability of data, frequency of collection, the clarity of instructions and recordkeeping, disclosure, or reporting format (if any), and on the data elements to be recorded, disclosed, or reported.

Not applicable.

9. Explain any decisions to provide payments or gifts to respondents, other than remuneration of contractors or grantees.

N/A. The FAA will not be providing any payments or gifts to respondents.

10. Describe any assurance of confidentiality provided to respondents and the basis for assurance in statute, regulation, or agency policy.

No assurance given. Entities submitting information understand that it is a voluntary submission to a publicly available database.

11. Provide additional justification for any questions of a sensitive nature, such as sexual behavior and attitudes, religious beliefs, and other matters that are commonly considered private.

N/A. This collection does not contain any questions of a sensitive nature.

12. Provide estimates of the hour burden of the collection of information. The statement should:

- **Indicate the number of respondents, frequency of response, annual hour burden, and an explanation of how the burden was estimated. Unless directed to do so, agencies should not conduct special surveys to obtain information on which to base hour burden estimates. Consultation with a sample (fewer than 10) of potential respondents is desirable. If the hour burden on respondents is expected to vary widely because of differences in activity, size, or complexity, show the range of estimated hour burden, and explain the reasons for the variance. Generally, estimates should not include burden hours for customary and usual business practices. * If this request for approval covers more than one form, provide separate hour burden estimates for each form and aggregate the hour burdens.**
- **Provide estimates of annualized cost to respondents for the hour burdens for collections of information, identifying and using appropriate wage rate categories. The cost of contracting out or paying outside parties for information collection activities should not be included here. Instead, this cost should be included under item 13.**

Number of respondents (total): The FAA expects up to three U.S. airplane manufacturers to potentially submit a voluntary CO₂ certification datasheet each year. Based on agency participation with ICAO in developing the airplane CO₂ standards, the agency expects up to 12-20 non-U.S. airplane manufacturers to submit data annually, with no effect on U.S. respondents.

Frequency of submission of CO₂ certification datasheet per respondent:

- Each manufacturer decides whether to submit information to the CO₂DB following certification of an airplane model, with one datasheet for each airplane model. Based on the number of airplanes certificated from 1900-2019, each U.S. manufacturer could be expected to certify up to two new models every three years. Thus, in mathematical terms, the FAA would expect to receive an average of two thirds of one datasheet from each U.S. manufacturer each year.
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Hour burden per year (total): The FAA estimates that filling and submitting two (2) CO₂ certification datasheets (i.e., 2 responses) would take a total of five (5) hours per year.

- It is estimated that the respondent will take a total of 2.5 hours to prepare and submit a CO₂ certification datasheet. The breakdown of this burden is 1 hour to fill out the datasheet, 0.5 hour for record keeping associated with the CO₂ certification, and 1 hour to disclose and submit the datasheet to the FAA.

Summary (Annual numbers)	Reporting	Recordkeeping	Disclosure
# of Respondents <i>(U.S. respondents only)</i>	3	3	3
# of Responses per respondent	2/3	2/3	2/3
Time per Response	1	0.50	1
Total # of responses	2	2	2
Total burden (hours)	2	1	2

13. Provide an estimate for the total annual cost burden to respondents or record keepers resulting from the collection of information.

Overall, this collection is estimated to result in the following:

- The total cost to all manufacturers of filling and submitting two CO₂ certification datasheets would be approximately \$298 per year.

CO2DB submission annualized cost (total): Based on hourly cost assumptions described in the section below: “Explanation of CO₂ certification datasheet submission burden”, the total estimated cost for filling and submitting a CO₂ certification datasheet is approximately \$149 per individual datasheet submission.

Explanation of CO₂ certification datasheet submission burden:

The hourly rates for the preparation and submission of a CO₂ certification datasheet are based on a mix of wage rates that include a 50% burden on General and Operations Managers (11-1021) with an hourly rate of \$59.35 and a 50% burden on a Management Analysts (13-1110) with an hourly rate of \$44.92. The fully loaded rate of \$74.96 was calculated using a multiplier of 1.44 based on the United States average of wage and salaries and benefits for private industry workers [U.S. BLS 2018].

Note. – The information submitted on the CO₂ certification datasheet is expected to be part of the certification data that will be gathered and recorded as part of airplane CO₂ certification requirements. The CO₂ data would be reported voluntarily for inclusion in the CO2DB. With the exception of filling out the datasheet, there are no additional costs of collecting information in support of submissions to the CO2DB.

Note. – The FAA notes that 12 to 20 additional manufacturers are eligible to submit airplane data into the CO₂DB. Since these are non-U.S. manufacturers that will submit to their own CAs, the FAA has no means to estimate the cost burden on these entities. This lack of information and the voluntary nature of the submission have led to our exclusion of them from this assessment.

14. Provide estimates of annualized costs to the Federal government. Also, provide a description of the method used to estimate cost, which should include quantification of hours, operational expenses (such as equipment, overhead, printing, and support staff), and any other expense that would not have been incurred without this collection of information.

Estimated annualized cost to the Federal government: The total estimated costs to the Federal government related to the CO₂ certification datasheets are expected to range from \$3480 to \$4600 per year all of which is expected to be considered as operating (recurring) cost.

Note. – The range of cost estimates above includes expected processing of submissions from non-U.S. manufacturers the FAA finds would be eligible to submit CO₂ certification datasheets.

Explanation of how annualized cost to the Federal government was estimated:

- Estimates of costs to the Federal government include; cost of collecting electronically submitted CO₂ certification datasheets, reviewing them, adding them to the database, publishing the database, and supporting the electronic reporting systems.
- The collection of the CO₂ certification datasheets are assumed to take 1 hour per CO₂ certification datasheet submitted.
- The review of CO₂ certification datasheets is estimated to require 4 hours for each CO₂ certification datasheet submitted.
- The electronic publication of the CO₂DB is estimated to require 8 hours per publication. Assuming 4 publications per year, the total burden to publish the CO₂DB is estimated to be 32 hours per year.
- The hourly rate (\$42.67) for collecting, reviewing CO₂ certification datasheets and managing and publishing the CO₂DB are based on a mix of wage rates including a 10% burden on GS-15 with hourly rate of \$57.09 and 90% burden on a GS-13 with hourly rate of \$41.07 (where \$42.67 is calculated as the weighted sum of; \$57.09 multiplied by 0.1 and \$41.07 multiplied by 0.9).

15. Explain the reasons for any program changes or adjustments.

This is a new collection; therefore, it is not a program change.

16. For collections of information whose results will be published, outline plans for tabulation and publication. Address any complex analytical techniques that will be used. Provide the time schedule for the entire project, including beginning and ending dates of the collection of information, completion of report, publication dates, and other actions.

Upon receipt a new or revised CO₂DB datasheet, the FAA will integrate it into the

CO2DB and the record of changes will be updated. Data integration is a simple transfer of the limited amount of data contained in the one-page CO2DB datasheet into a single master table.

The FAA expects that the database will be available for download in a common table format as a Microsoft Excel file). The database will also include the submitted CO2DB datasheets in pdf format for review.

Additional background and supporting information related to the development and implementation of the CO2DB will also be available on the CO2DB website along with a Support Function communication mechanism (email address). Similarly to other publicly available ICAO databases hosted by other national aviation authorities, this supplemental information on FAA's website will provide detailed guidance for entities planning to provide a submission to the CO2DB.

The CO2DB will be published on an ad-hoc basis based on the receipt of CO2DB datasheets. For context, similar ICAO Environmental databases are published a few times per year:

- For the ICAO Engine Emissions databank hosted and maintained by the European Aviation Safety Agency, the frequency of publication varied over time with an average of slightly more than twice a year. There are no specific/regular update patterns throughout the years (i.e., updates have been published throughout the year except in August).
- For the ICAO NoisedB hosted and maintained by the French Civil Aviation Authority, the frequency of publication has been 3 to 4 times per year.

17. If seeking approval to not display the expiration date for OMB approval of the information collection, explain the reasons why display would be inappropriate.

FAA is seeking approval not to display an expiration date for the CO2DB datasheet template. The applicability of the ICAO standard in Annex 16 Vol. III is permanent. The information requested on the CO2DB datasheet template is not expected to change, but manufacturers may need to submit new or updated CO2DB datasheets for new airplane certifications or modifications, or they may need to amend existing database information. FAA requests approval not to display an expiration date that may confuse an international process.

18. Explain each exception to the topics of the certification statement identified in "Certification for Paperwork Reduction Act Submissions."

There are no exceptions to the certification statement.